

# PARKING ISSUES IN LUTAKKO FROM A USER-ORIENTED VIEWPOINT

Author Simo Purtilo

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JAMK UNIVERSITY OF APPLIED SCIENCES



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<p>Abstract</p> <p>In the spring of 2011 Lutakko Living Lab assigned a project called Lutakko Car Park case, which was carried out by students of JAMK University of Applied Sciences. The task was to implement a user-oriented research on parking related issues in Lutakko neighborhood in Jyväskylä, Finland. This case study uses its results as a basis.</p> <p>The objective of this study was to find out what the residents of Lutakko see as the main problems in the parking of their neighborhood.</p> <p>The research methodology used in this case study was qualitative. The main data collection method was semi-structured phone interview. To support it also an open-ended questionnaire was distributed on paper to the residents of Lutakko. The same questions were available on Lutakko Living Labs iLutakko website. The gathered data was analyzed by using content analysis.</p> <p>Through content analysis five main categories of parking issues were defined. These categories were: 1. Lack of parking space, 2. Parking stall prices and parking fees, 3. Parking time limits, 4. Lack of knowledge and 5. Parking abuse and parking control</p> <p>This is a very specific case study conducted in a unique environment. Therefore its results may not necessarily be generalizable to other situations. As Lutakko neighborhood is still under development and construction, it is unclear what the parking situation will be when the construction is finished. Thus, there are still possibilities for further research. A similar research on the views of the end users could be conducted in the future to find out how the parking situation has developed.</p>		
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<p>Tiivistelmä</p> <p>Keväällä 2011 Lutakko Living Lab käynnisti projektin nimeltään Lutakko Car Park case, joka toteutettiin Jyväskylän ammattikorkeakoulun opiskelijoiden toimesta. Tehtävänä oli toteuttaa käyttäjälähtöinen selvitys pysäköintiin liittyvistä ongelmista Lutakon kaupunginosassa, Jyväskylässä. Tämä tapaustutkimus käyttää sen tuloksia perustanaan.</p> <p>Tämän tutkimuksen tavoitteena on selvittää mitä Lutakon asukkaat pitävät pääongelmina naapurustonsa pysäköinnissä</p> <p>Tutkimus on toteutettu laadullisin tutkimusmenetelmin. Ensisijaisena aineiston keruumenetelmänä käytettiin puolistrukturoitua puhelinhaastattelua. Sitä tukemaan toteutettiin myös avoin kysely, joka jaettiin paperisena Lutakon asukkaille. Samoihin kysymyksiin oli mahdollista käydä vastaamassa Lutakko Living Labin iLutakko web-sivulla. Aineiston analyysimenetelmänä käytettiin sisällönanalyysia.</p> <p>Sisällönanalyysin avulla selvisi viisi pysäköintiongelmiä pääluokkaa. Nämä pääluokat olivat: 1. Pysäköintitilan puute, 2. Pysäköintipaikkojen hinnat ja pysäköintimaksut, 3. Pysäköinnin aikarajoitukset, 4. Tiedonpuute, sekä 5. Väärin pysäköinti ja pysäköinninvalvonta</p> <p>Tämä on erityinen tapaustutkimus, joka on toteutettu ainutlaatuisessa ympäristössä. Näin ollen sen tuloksia ei välttämättä voida yleistää muihin tilanteisiin. Lutakon rakentamisen ja kehityksen ollessa edelleen kesken on epäselvää miltä pysäköintitilanne tulee näyttämään alueen valmistuttua. Täten on vielä olemassa mahdollisuuksia jatkotutkimukselle. Samankaltainen käyttäjälähtöinen tutkimus voitaisiin toteuttaa tulevaisuudessa, jotta nähtäisiin miten Lutakon pysäköintitilanne on kehittynyt.</p>		
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# 1 INTRODUCTION OF THE TOPIC

## 1.1 Research on Parking Issues in Lutakko

Since the planning and construction of Lutakko, a residential area in Jyväskylä, Finland, was started in 1995, there has been a lot of discussion about how the parking in the area should be implemented. This has required years of planning and attempts to find a solution that would satisfy all of the parties concerned. The user groups, which all have their own parking needs include, on one hand, the Lutakko residents, and on the other the companies, a congress and trade fair center and the educational facilities operating in the neighborhood. The planners have also had to consider the limited size of the area and explore what would be the best possible way to utilize it. So far, meeting the needs of everyone has turned out to be quite a complicated task.

Since the early years, the situation has developed as the plans have materialized and issues related to parking raised with attempts to solve them. The construction of Lutakko is still going on. It remains to be seen if the area turns out to be a practicable environment satisfying everyone's parking needs.

During the spring of 2011, a project called Lutakko Car Park Case was carried out by students of JAMK University of Applied Sciences. The task was to implement a user-oriented research on parking related issues in the Lutakko neighborhood. The aim was to find out what the state of parking in the neighborhood was like from the user viewpoint. The results were then to be analyzed and used in this study for defining the main problems in parking from the viewpoint of Lutakko residents. The project was assigned by Lutakko Living Lab.

Lutakko parking has been researched also before, but from a different perspective (see Paananen 2011). The present research, however, is unique because it aims to find out how the residents of the area have experienced the parking situation and what they see as the main issues in it.

Prior to conducting the research there was already information on particular parking issues resulting from earlier discussions on the topic. They had been brought to the attention of Lutakko Living Lab by the residents of Lutakko through various channels. One of the issues mentioned was lack of parking space. Other issues included price of parking, parking time limits, lack of knowledge of the available parking services in the area and parking abuse. The interviews and the questionnaire were planned and conducted using the aforementioned issues as a basis. The goal was to find out whether the subjects had faced these or some other issues related to parking.

Ideally, this research has potential to benefit the whole Lutakko community and contribute to the discussion on the parking situation of the area. It will also reveal some views on the current situation that might not have been heard otherwise.

Now the consignor of this research will be introduced. After that, some basic background information on Lutakko, the construction process of the area and information on the parking arrangements will be discussed shortly. Then the research question that is the basis of this research will be defined. After that the research methods that were used to answer that question will be explained and backed up by literature. Then the results of data collection analyzed by content analysis will be laid out. Lastly, there will be an evaluation of the research process and discussion on possibilities for further research on the subject.

## 1.2 The Consignor of the Research: Lutakko Living Lab

The research project was assigned by Lutakko Living Lab, which is a real-life test and experimentation environment where users and producers co-create innovations and new services in Lutakko. It offers tools and expertise for user centric service development, and its operations are usually implemented through projects. The cases vary from business to social innovation using a variety of service design methods. Lutakko Living Lab is a member of the European Network of Living Labs (ENoLL) and it operates inside the JAMK

University of Applied Sciences. (Lutakko Living Lab, 2011)

## 1.3 Background Information on Lutakko

In this chapter I give some background information on Lutakko as an area and talk shortly about its development and construction. I will also present information and statistics on the parking services that the area offers.

### 1.3.1 Lutakko as an Area

Lutakko is a residential district situated in the downtown area of Jyväskylä, Finland, by the lake Jyväsjärvi. In the beginning of 2009, there were approximately 2500 inhabitants living in the area. There were about 1000 jobs and 1500 students enrolled in the Lutakko unit of JAMK University of Applied Sciences. (Päivänsalo 2009, 332)

Lutakko is home to the highest buildings in Jyväskylä, the 15-storey residential building Horisontti and the Innova building, where many IT companies operate. Along the lakeside, there are many other residential buildings and some park areas. A trade fair and congress center called Jyväskylän Paviljonki has a central location in the area. The lively Paviljonki hosts over a 1000 events per year that bring approximately 400 000 visitors to the area. A live music venue called Tanssisali Lutakko regularly holds concerts and also accommodates rehearsal rooms for musicians, studios for artists, a theatre, a yoga studio and office space. Also JAMK University of Applied Sciences has school buildings in Lutakko. Their facilities include the information technology institute Dynamo and the Team Academy which operates in an old factory building. (Lutakon asukasyhdistys Ry 2009.)

### 1.3.2 Development of Lutakko

From the year 1912 until 1995, a plywood mill founded by Wilhelm Schauman



occupied the area. Schauman Wood Ltd. sold the property in 1988 to a real estate company called Jyväs-Helmi Ltd., since then responsible for planning the construction of the residential area. Skanska Oyj Plc. and YIT Oyj Plc, as the power behind the throne, are responsible for the actual construction in the area. The demolition of the plywood mill began in 1993. After 1995, when the industrial activities in Lutakko had completely ceased and some soil research and cleansing had been done, the construction began. (Lutakko, 2009.)

The construction and planning of Lutakko was divided into implementation areas. The residential blocks along the lakeside were numbered from one to five. The rest of the areas had their own names like Toimistokortteli, Tornikortteli, Vanha Vaneritehdas and Paviljonki. The construction proceeded in stages as it would not have been sensible to plan the whole area at once. It had been decided that the planning and construction would start from the north corner of Lutakko and proceed towards the south along the shore of Jyväsjärvi. Each area chosen was appropriate for a few years of construction. (Päivänsalo 2009, 127.)

The construction work in Lutakko is still going on. At the moment, the construction of the fifth implementation stage is in progress. The fifth implementation stage includes an office block and a new residential block which are located close to the Paviljonki. Between them there will be an open plaza for holding events. The plaza will be called Lutakko square. The residential block replaces an area that used to be one of Lutakko's largest parking lots. However, a parking garage that fits approximately 320 cars will be built under the Lutakko square (Salomaa 2011). A congress hotel will be built next to Paviljonki. The Lutakko Harbor is also under construction.

There have been plenty of plans drawn on Lutakko over the years. However, the area has not turned out as it was originally planned. How it looks today is a mixed result of many individual decisions and plans. There have been many interested parties involved with their own needs and requirements. Because of that, the plans have had to be changed many times. The intended construction that would have been implemented in a strict order according to the overall plan did not materialize. (Päivänsalo 2009, 321.) Even today, there

is no absolute certainty of what Lutakko will look like, for example, in the year 2020 (op. cit., p. 6).

### **1.3.3 Parking Services in Lutakko**

Below the parking areas and facilities of Lutakko will be presented. These parking services are divided into public and private parking areas. After that the variety of parking products offered by Jyvä-Parkki Ltd. will be described.

According to Paananen (2011), traffic engineer Jorma Lipponen has said that in March 2011 there were approximately 3030 parking spots in Lutakko. He informed that about 70 percent of the street side and parking lot stalls were occupied by visitors' cars at the time. There were 80 valid residential parking permits in use, half of them for the multi-storey car park and half for street side parking. There were also about 350 parking permits reserved by the companies of the area. Approximately 1800 of the areas parking stalls were managed by Jyvä-Parkki Oy. (p. 55.)

Paananen (2011) says that in October 2011 the main areas for public parking in Lutakko were the parking areas in the harbor and street side parking on Schaumanin Puistotie, Blomstedtinkatu and Piippukatu. Street side parking was toll-free for visitors and limited by an obligation to use a parking disc. There was also a multi-storey car park of 540 parking stalls in connection with Paviljonki. All street side parking stalls could be used with a residential parking permit. (pp. 61–62.)

According to Paananen's (2011) estimates, in October 2011 there were about 282 parking stalls in the harbor area. There was also a parking space with approximately 150 parking stalls next to the street Uno Savolan katu, which will be replaced by residential buildings in the future. There was another parking lot for public parking between Paviljonki and Schaumanin puistotie for roughly 120 cars. Approximately a maximum of 108 cars could be parked on the street sides. Also parking in the multi-storey car park of Jyväskylän bus and train station Matkakeskus is possible. It has 432 parking stalls and is

located only a few hundred meters from Lutakko. (pp. 62-63)

As mentioned earlier, a parking lot of 150 stalls will be replaced by residential buildings in the future. However, a garage with 320 parking spots will be built under the Lutakko square. There are also plans of building three other parking garages close to Lutakko. (op. cit., p. 64.)

Private parking areas are divided into two categories, business parking and residential parking. There is a private multi-storey car park called P-Innova which was extended in spring 2011 and now fits 334 cars. (op. cit., pp. 67-68.) On the properties of business companies, JAMK University of Applied Sciences and other private areas there are approximately 180 parking stalls. On residential properties there are about 1346 parking spots which will increase to 1690 in the future. (op. cit., p. 73)

#### **1.3.4 Parking Products of Jyväs-Parkki Oy**

Jyväs-Parkki Oy offers a variety cards and permits for their parking services. Their parking products include monthly and yearly cards, a congress card, pre-paid cards, a residential card for the multi-storey car park, a weekend card and a residential parking permit for street side parking. Below I will present some of these different parking products in detail. (Tuotteet, 2011.)

The residential parking permit for street side parking authorizes a resident of Lutakko to park without a time limit on the residential parking areas designated by signs. These include parking bays on the streets Schaumanin Puistotie, Blomstedtinkatu and Piippukatu. Also part of the harbor parking lot is designated for residential parking. A resident of Lutakko can get one vehicle specific permit per apartment, which can be issued for a car or a van. (op. cit.)

The permit needs to be placed on the front window of a car, so that it can be read from the outside. If the permit is not on display, a parking ticket will be issued. The ticket will not be dismissed even if you present the permit to the parking inspector afterwards. A residential parking permit costs 70 euros per

year. These parking permits are also offered to Lutakko's companies and organizations for 230 euros per year. (op. cit)

Another parking product for the inhabitants of Lutakko is the residential parking card for the multi-storey car park. It authorizes a resident to park in the multi-storey car park of Paviljonki between 4 pm and 9 am during the weekdays and 24 hours per day during the weekend. If the customer drives in or out of the garage outside of these times, he will be charged a regular short-term parking fee which has to be paid before driving out. The residential parking card costs 40 euros per month. (op. cit)

Jyväs-Parkki offers other parking service products that are available for anyone. A congress card is valid for a defined time period. The price is determined by the regular parking fee. There are also two different pre-paid cards on offer. One of them is rechargeable and the other one is a single-use card which is worth a certain amount of euros. (op. cit)

The weekend card authorizes the customer to park during the weekends from 4 pm on Friday until 9 pm on Monday. The monthly price for a weekend card is 30 euros. (op. cit)

## 2 RESEARCH QUESTION

The purpose of this research was to find out the main issues of parking in Lutakko from the users' viewpoint. Particularly in this case, the focus was on the residents of the area as they were the target of the interviews and the short questionnaire. Thus the main research question is: "What are the main problems with parking in Lutakko as perceived by the users?"

## 3 RESEARCH METHODOLOGY

In this chapter, the methods that were used to find the answers to the aforementioned research question will be defined and justified. The study was conducted as a qualitative case study, and the main method of data collection was semi-structured phone interview. To support this method, an open-ended questionnaire was distributed on paper to the residents of Lutakko. The same questions were available on Lutakko Living Lab's iLutakko website. The method chosen for analyzing the results was content analysis. In this chapter the choice of these particular methods will be explained and backed up by research literature.

### 3.1 Qualitative Case Study

Strauss and Corbin (1998, 10) define qualitative research as "any type of research that produces findings not arrived at by statistical procedures or other means of quantification". They also suggest that one of the valid reasons for choosing qualitative methods is the nature of the research problem. A research that attempts to understand the meaning or nature of experience of persons with certain kind of problems lends itself to getting out into the field and finding out what people are doing and thinking. (Strauss & Corbin 1998, 10-11.) That reasoning also applies to this case study, as the objective was to get a detailed insight on past experiences of the users of parking facilities. Thus, the nature of the research problem is one of the reasons why qualitative research methods were the most appropriate to use for this research.

According to Lutakko Living Lab's ideology, human activities happening in a real life environment are the basis for innovation and development. In this context, user-centered and participatory methods are utilized. The needs and ideas of the end-user function as the drivers of the innovation process. (Lutakko Living Lab, 2011.) The ideas and needs of the end-user being central

to the Living Lab ideology also partly explain the choice of research methods for this case. Ideas come from experiences and, as mentioned, a qualitative methodology is the most appropriate for a research that attempts to get an in depth understanding of people's experiences.

Alasuutari (1999, 39) proposes that qualitative research methods are not chosen just because available resources would not allow a quantitative research. According to Tuomi and Sarajärvi (2002), however, in many cases research resources like time and money determine the scale of the data collection and the number of informants (p. 87). Consequently, available resources are also factors which, to some extent, affect the choice of methods. In this case Lutakko Living Lab wanted to get responses from individuals in a tight schedule with limited resources. It was also known that in these circumstances it would not be possible to obtain enough data to conduct a quantitative analysis. Although these limitations had to be taken into account, they were not the main determinant.

Kananen (2009) says that the aim of qualitative research is to get as much information as possible from each unit of the research. Furthermore, he suggests that in quantitative research it is not possible to use as much time and resources on single cases as it would increase the costs and lengthen the research time. (p. 25.) Thus, conducting the research with qualitative methods allowed concentration on individual users and helped to get a more thorough understanding of the nature of their experiences.

This research was conducted as a case study. Case study is "a form of qualitative descriptive research that is used to look at individuals, a small group of participants, or a group as a whole" (Becker, Dawson, Devine, Hannum, Hill, Leydens, Matuskevich, Traver & Palmquist, 2005). The case study looks intensely at an individual or a small participant pool and draws conclusions only about that participant or group and only in that specific context. This means that instead of discovering a generalizable truth or finding cause-effect relationships, the emphasis of this research is on the exploration and description of the phenomenon. (Becker et al. 2005.) Case studies combine multiple sources of information, for example documents, interviews

and observations (Kananen 2008, 84). The aforementioned also applies to this research, as it is a very specific case study conducted in a unique environment. Therefore its results may not necessarily be generalizable to other situations.

## 3.2 Data Collection Methods

According to Tuomi and Sarajärvi (2002), the most common data collection methods in qualitative research are interview, questionnaire, observation and information based on different kinds of documents. These methods can be used separately, concurrently or in different kinds of combinations, depending on the research problem and the available resources for the research. (p. 73)

According to Lutakko Living Lab, in this type of research some kind of a workshop or a user panel could also have been used for collecting information. As mentioned, however, the limitations of resources and time favored a different choice of methods. Thus, the methods chosen for data collection were individual phone interviews and an open questionnaire. These turned out to be appropriate and time-effective methods for this research. They were also well suited for the purpose, considering the nature of the research problem. They would give a deeper insight on the opinions of individuals regarding the parking issues in Lutakko.

According to Tuomi and Sarajärvi (2002), Eskola (1975) defines questionnaire as a method where informants fill out a questionnaire form independently, either in a controlled group session or at home. According to him, interview as a method refers to a personal interview, where the interviewer presents the questions to the informant verbally and writes down the answers. (p. 75)

### 3.2.1 Semi-structured Interview

According to Hirsijärvi et al. (2004) the greatest advantage of interview as a

method is that it allows more flexibility in data collection. An interviewer is able to change and adapt to the situation and modify the data collection according to the respondent. (p.194) The same is suggested by Tuomi and Sarajärvi (2002), who say that this allows the interviewer to repeat questions, correct misunderstandings, clarify phrasing and discuss with the informant. The questions can also be presented in an appropriate order according to the situation. These possibilities make interview a more flexible data collection method than, for example, a questionnaire sent by mail. (p. 75) Flexibility was the main reason why interview was chosen as the primary data collection method for this research.

Kananen (2009, 37) says that in qualitative research one should pay careful attention to choosing the research subjects. He suggests that the chosen informants should represent relevant observation units regarding the phenomenon and know as much as possible about it. Tuomi and Sarajärvi (2002, 76) suggest that one of the advantages of interview as a method is that these choices can be made. In this research, the subjects of the interviews were chosen accordingly: Lutakko residents, representatives of the residents' association and a representative of a housing company. The idea was to get different perspectives on the issues from different sources.

Interviews have been traditionally categorized into structured and unstructured depending on how predetermined and binding the questions are. An extreme example of a structured interview could be an interview form that has predetermined questions with response options, which are presented in the same way and order to all the interviewees. On the other hand, an unstructured interview can sometimes resemble an open conversation where both, the interviewer and the interviewee can bring up topics and carry the discussion in the desired direction. (Ruusuvuori & Tiittula 2005, 11.) In this case the individual phone interviews that took place were semi-structured (see appendix 1). For that kind of an interview it is typical that some aspects are predetermined and some are not.

For this data collection a semi-structured interview method was the most appropriate to use. An unstructured interview, for example, might not have



found out whether the respondents had faced the issues that were known to exist. On the other hand, a structured interview with multiple choice questions would not have given the respondents the freedom to mention other issues they had experienced with parking in Lutakko. The semi-structured form of the interviews allowed the use of both, structured and open questions. This made it possible to ask the informants reasoning for their opinions and to deepen the acquired information with sub questions.

### **3.2.2 Open-ended Questionnaire**

According to Dawson (2002), there are three basic types of questionnaire: closed-ended, open-ended or a combination of both. Close-ended questionnaires are used to generate statistics in quantitative research. They are easy to analyze as they follow a set format and can be scanned straight into a computer. This means that greater numbers can be produced. Open-ended questionnaires are used in qualitative research, although some researchers quantify the answers during the analysis stage. As an example, close-ended questionnaires might be used to find out how many people use a service, whereas open-ended questionnaires might be used to define what people think about a service. (p. 31)

The questionnaire used as a secondary data collection method in this research was open-ended (see appendix 2). Like Dawson (2002) suggests, open-ended questionnaire is the most appropriate one to use when opinions are being sought instead of numbers. This also means that fewer questionnaires need to be distributed. (p. 31) This data collection method fit well for its purpose, as the aim was to investigate individuals' experiences and opinions.

## **3.3 Method of Analysis**

Abductive, or theory guided, content analysis was used to analyze the results

of the phone interviews and the open questionnaire. According to Tuomi and Sarajärvi (2002, 93), content analysis is a basic method of analysis which can be applied to all the traditions of qualitative research. In content analysis the research material is first divided into parts and then assembled again in a logical way. The aim is to turn the fragmented material into meaningful, clear and consistent information, from which interpretations and conclusions can be drawn. (Tuomi & Sarajärvi 2002, 110.) Content analysis can be conducted with data driven (inductive), theory driven (deductive) or theory guided (abductive) approaches.

According to Tuomi & sarajärvi (2002, 110–111), Miles and Huberman (1994) describe data driven content analysis as a three stage process:

1. reduction of the research material
2. clustering, or grouping of the material
3. abstraction, or creation of theoretical concepts

According to Tuomi and Sarajärvi (2002), theory guided content analysis proceeds first in terms of the material, the same way as the data driven analysis. It differs in the abstraction stage of the process, where empirical material is combined with theoretical concepts. The units of analysis arise from the research data, but earlier knowledge guides and helps the analysis. In data driven analysis theoretical concepts are created from the research material, whereas in theory guided analysis they are brought out as “already known”. The impact of earlier knowledge is identifiable in the analysis. However, the aim is not to test the theory, but rather to create something new. (pp. 98, 116.)

A theory guided approach to content analysis was the most appropriate method of analysis for this research. As there was already previous knowledge of parking issues in Lutakko, the data collection was conducted according to that. That knowledge functions as a guideline in the analysis as well. However, as the aim was to investigate the whole variety of issues that the informants had faced, it was reasonable to also include theoretical concepts arising from the research data.

## 4 IMPLEMENTATION OF THE RESEARCH

In the Lutakko Car Park Case project the research was divided into two parts or areas of interest. There were two separate studies, one that investigated the views of Lutakko residents, and another on the viewpoint of people visiting the area (students, workers, trade fair visitors, etc.). This case study is based on the views of Lutakko residents, housing companies and the residents' association.

The research data was collected by conducting individual interviews by phone and an open questionnaire that was targeted mainly to the residents of Lutakko. During the research five individual phone interviews took place, which included two residents of Lutakko, two representatives of the residents' association and one from a housing company operating in Lutakko. The questionnaire was distributed on paper to the residents of the area. The same questions were available on Lutakko Living Lab's iLutakko website.

The first stage of data collection was conducting the interviews. Before the interviews an extensive list of questions was compiled using the known parking issues as a basis. This version of the interview was used with the two residents of Lutakko and the representatives of the Lutakko residents' association. For the interview with the representative of the housing company a shortened list of questions was used. A different set of questions was appropriate since many of the topics in the longer version of the interview did not concern the interviewee as he does not reside in Lutakko. Interviewing this person, however, was justified as his answers present the viewpoint of one of the housing companies operating in the area.

As mentioned, the form of the interview was semi-structured. Many of the interview questions were so called "yes or no" questions, which were, depending on the answer, followed by one or more sub questions to get

further comments on the topic. The informants were often asked to reason their answers. Open questions were also used in the interview, some of them more specific than others. The purpose of the structured and specific questions was to find out whether the respondents had faced those issues that had been discussed in the past. Open questions were used to find out what kind of other problems the users of parking facilities had experienced in the neighborhood. The interviews could not be recorded, so transcription of the responses was impossible. Therefore, notes had to be made of the informants' responses. However, the notes were written down in the respondents' own words.

To support the individual interviews an open-ended questionnaire was conducted on paper and electronic form. Three questions were picked from the list of questions that was used in the interviews. They were included in a leaflet that also contained questions concerning a time bank system that was going to be established for the community by Lutakko Living Lab. The aim was to get as comprehensive answers as possible with fewer questions. Two questions were chosen to pinpoint two specific topics. The third question was more general in nature and allowed the subjects to freely bring up parking issues that they had faced in Lutakko.

The response rate of the questionnaire was expected to be rather low. As mentioned, however, this data collection method was intended to produce opinions from individuals instead of generating statistics. It was a secondary data collection method which was intended to support the individual interviews. The paper version mailed to the residents of Lutakko produced 10 responses and the internet questionnaire 14 responses.

The paper version of the interview could be directed to the residents of the area. The electronic version of it, however, was open for anyone and thus the informants could not be chosen in the same way. It could, however, be assumed that also those responses came mainly from Lutakko residents, as they are the most interested in the matters of the neighborhood.

The research data gathered in the data collection stage was analyzed by

using theory-guided content analysis. According to Tuomi and Sarajärvi (2002), before starting to analyze the material, a unit of analysis should be defined. That unit can be a word, a sentence, a part of a sentence or an idea that is relevant in terms of the research task. (p. 112) In this study, the units of analysis were the individual parking related problems that were mentioned by the respondents.

The analysis started by reduction of the material. As Tuomi and Sarajärvi (2002) propose, reduction is a stage of analysis where irrelevant material that does not include answers to the research question is left out. The original expressions that arise from the material are coded and presented as simplified expressions. (p. 112.) In this analysis, the notes of the interviews and the responses to the open-ended questionnaire were reduced by leaving out the information that did not relate to parking problems. The next stage of analysis is clustering, where the expressions are grouped according to similarity and divided under sub-categories (op. cit., p. 112). In this case those sub-categories were residential parking and visitor parking. There were issues that related to one or both of those categories. The abstraction stage of the analysis was guided by problem categories that were defined according to earlier discussion on the parking issues in Lutakko. The sub-categories were divided under those five main categories.

## 5 RESULTS OF THE DATA COLLECTION

In this chapter the results from the individual interviews and the open-ended questionnaire are presented. The analysis gave five main categories of parking related issues. These categories are: 1. Lack of parking space, 2. Parking stall prices and parking fees, 3. Parking time limits, 4. Lack of knowledge and 5. Parking times and parking abuse. Under these categories are two sub categories of issues related to residential parking and visitor parking.

## 5.1 Lack of Parking Space

The results indicated that lack of parking space is an issue in Lutakko. It seems that there is not enough parking space in general or it has not been utilized well enough. In addition to that, there are some more specific issues. These issues are related to two areas which are residential parking and visitor parking. Visitor parking is an issue that concerns several different user groups. Those include the residents' house guests, workers, students and other such as trade fair visitors. Another problem that is related to visitor parking is the lack of toll-free parking in the area.

The results indicated that there are some issues related to the deficiencies in residential parking. One of the problems is that so far, the housing companies have not been able to offer enough parking space to meet the demand. It has not been possible to offer a parking stall to every tenant and apartment owner who would like to have one. Residents who have not reserved a parking spot cannot be offered one as all of them are already taken. This is inconvenient as it leaves the car owners of the neighborhood with no choice making them resort to street side parking and the multi-storey car park.

The visitors whose parking needs are in a close relation to residential parking are house guests. There seems to be a lack of guest parking spots on the properties of residential buildings. With many residential buildings, there is no parking space at all for visitors to the area. For this reason, the guests of Lutakko residents may need to seek for a parking spot elsewhere.

Students and workers who come to Lutakko by car were said to have problems with finding parking space. Consequently, the lack of toll-free parking seems to be an issue. Particularly students cannot afford to pay for their parking on a daily basis. A great number of the car park users are students for whom it is an everyday challenge to find parking space in the area.

According to the results, there are certain points of time when the parking

situation is at its worst. The days when trade fairs and other events are being held in the Paviljonki Congress and Trade Fair Center seem to be the most congested. The most congested times of the day seem to be the afternoon and the evening. The results suggest that weekends are generally more congested than the week days. Summer seems to be the busiest season of the year for Lutakko parking.

## 5.2 Parking Stall Prices and Parking Fees

Two issues that are in connection with each other are the pricing of parking stalls on the residential properties and the parking fees elsewhere. Of course the pricing of the residential parking stalls is an issue that only concerns the residents of Lutakko. On the other hand, parking fees are something must be discussed from both, the residents' and the visitors' viewpoint.

In some cases the outdoor parking stalls with heating poles and the parking stalls in the garage are seen as reasonably priced. According to other views, however, the pricing of the residential parking stalls is way too high.

The parking fees seem to be more of a concern for the people visiting Lutakko. However, they also concern many residents as they might not be able to get a parking stall from their own residential building. Due to the lack of guest parking space, also their house guests often have to leave their cars parked somewhere else, like in the multi-storey car park. Again, the results would indicate that parking fees in the area are sometimes seen as too high, on the other hand some people do not see them as an issue. It seems that there should be more disc parking space in Lutakko instead of pay and display parking.

## 5.3 Parking Time Limits

According to the results too short disc parking times sometimes pose

problems in Lutakko. It seems that short parking time limits are problematic, especially if the residents have house guests coming over. Two hours was seen as too short of a time for parking. The results indicate that an optimal parking time would be four hours. Even longer time limits, or their complete removal, were suggested. Longer time limits would, however, slow down the freeing up of parking spaces. For parking bays that are designated to customers by business premises two hours of parking time would be enough.

## 5.4 Lack of Knowledge

There also seems to be some lack of knowledge of the parking possibilities in Lutakko. Some of the things that residents of Lutakko seem to lack knowledge on are the residents' parking permit for street side parking and the residential parking card for the multi-storey car park. People might not realize that buying a year's permit for the multi-storey car park is in some cases even cheaper than buying or renting a parking stall from a housing company.

The results would indicate that there is also insufficient knowledge of the parking facilities among the visitors of Lutakko. The locations of disc parking areas are things that visitors may not be aware of. As an example, there are four hour parking spots near the JAMK University of Applied sciences that some people might not know of. As many visitors are not familiar with the area or the locations of the toll-free parking spaces, they cannot make use of those facilities. Even all of the residents do not know the area well enough to advise visitors on where to park.

## 5.5 Parking Abuse and Parking Control

There has been some parking abuse happening in the area. Cars have been sometimes seen parked up illegally on construction sites, green areas and rescue roads. Some cars have also been carelessly parked up on the street side so that they reserve more space than would be necessary.



Parking control seems to be mainly a good thing as it prevents parking abuse. Introduction of private parking control companies in Lutakko has eliminated some of the illegal parking especially from the parking lots of apartment buildings and the rescue roads. However, in some cases strict parking control also seems to have its downsides. As an example, many of the fined drivers are students who are tight on funds. Parking control is generally seen as quite strict in Lutakko.

## 6 DISCUSSION

### 6.1 Analysis of the results

The aim of this case study was to find out the main problems with parking in Lutakko from the viewpoint of the residents. An analysis of the data collected led to an understanding of the main problem areas. There are issues that only concern the residents of Lutakko. However, the issues related to visitor parking also affect the lives of the residents in the area.

The main parking problems in Lutakko are related to the lack of parking space. However, it would seem that lack of parking space in general is not the actual problem. Instead, the results showed some more specific deficiencies in the parking services of the area that have been seen as problematic. One issue that only concerns the inhabitants of Lutakko is the lack of parking space for residential properties. People would prefer to have a parking stall on the property of their home building. This being impossible, other parking services like a residential parking permit or a parking card for the multi-storey car park are the only options. The main problem with this seems to be the inconvenience of walking the distance from the parking lot to the home building. Although a parking spot will assuredly be found somewhere in the areas designated for residential parking, there is no guarantee of finding one close to the apartment building. The parking situation of the residential properties was thought to be better in the newly constructed areas compared

to the older ones. This leads to an assumption that there have been attempts to improve the parking situation of the residential buildings.

The pricing of the parking stalls with heating poles or the ones in the residential garage divided the respondents' opinions. Some thought that the prices are too high but understood why a lower price cannot be offered. However, some even said that the prices of residential parking stalls are extremely high. One view is that the prices are quite affordable when compared to other cities. One explanation of these divided opinions could be differences in parking stall prices between the buildings. Another explanation might be the different levels of income of the respondents. It might also be that some of the respondents who have moved to Lutakko are used to lower pricing in residential parking. An assumption is that in many cases people would be prepared to pay the asking price for a parking stall if they only could be offered one.

In some cases the parking permits to the multi-storey car park and the street side parking may offer a cheaper option for residential parking. In buildings where all the parking stalls are reserved, these are the only reasonable alternatives. Despite that, it has been said that there might be some residents unaware of those options. Therefore, a lack of knowledge could also be problematic for some residents of the area.

There is one user-group among the visitors whose parking needs are closely related to residential parking. This group is the house guests of the residents. As there is a lack of parking space for the properties of the residential buildings, it has not been possible to include many visitor parking spots in the parking layout. This means that the guests of the residents have to find a parking spot for their cars elsewhere. This is seen as a problem for three reasons: 1. the guests will probably have to pay for their parking, as finding a disc parking space might be difficult, 2. the parking spot might not be found close by, and 3. even if they find a disc parking space, there might be a short parking time limit. Allegedly this raises the threshold for guests to come and drop by for a visit.

Although residential parking poses problems in Lutakko, it seems that visitor parking is nowadays seen as much more of an issue. As mentioned earlier, the lack of parking space in general does not seem to be the actual problem in the area. This seems to apply to the visitors of Lutakko as well. According to the results, finding a pay and display parking spot should be fairly easy most of the time. Therefore, this alone may lead to an assumption that the lack of toll-free disc parking space is in fact seen as a bigger problem for the visitors. To confirm the assumption, this problem also repeatedly came up in the results. It seems that people generally have fewer problems finding a parking space in Lutakko if they are willing to pay for it.

An issue that is related to toll-free parking is the parking time limits, for example, when Lutakko residents have guests coming over. It seems that people would prefer four hours as a time limit instead of two hours. Although longer time limits have their benefits, it was also thought that prolonging them too much would slow down the freeing up of parking spaces. Thus, a shorter time limit would allow more cars to park on the same spot during the same day. This, of course, means that a complete removal of the time limits is not a very realistic suggestion.

The parking fees were seen as an issue by some respondents. According to the results, some think that the prices of parking services offered by Jyväskylä-Parkki are too high. There were divided opinions here as well as some do not see the parking fees as an issue. It could be true that there are some user-groups among the visitors who cannot afford to pay for their parking on a daily basis. This was exemplified by students who form a large part of the visitors and have a comparably lower level of income. Otherwise, the visitors would just prefer toll-free parking spots so that they would not always have to pay for their parking. One explanation might be that peoples' attitudes towards pay and display parking are more of a problem than towards the pricing of parking services. One assumption was that people who move from suburban houses into downtown apartments are not used to pay for their parking.

Parking abuse is a phenomenon that seems to result from other parking issues in Lutakko. The lack of parking space, and more specifically toll-free

parking space, may cause visitors of Lutakko to park their cars illegally. This happens when people do not want to pay for their parking and they are not able to find a toll-free parking spot. The situation might be that simply there are no vacant disc parking spots to be found, or they might be too far away from the destination. Otherwise, parking abuse might also result from a lack of knowledge of the areas parking facilities.

## 6.2 Evaluation of the Research

The case study explored the current parking situation in Lutakko from the viewpoint of the area's residents. It aimed to define what were seen as the main parking problems. The results form a general picture of the main issues that were seen as the most problematic by the informants. Thus, the research question was answered. From that point of view, it can be said that the research was rather successful. There is, of course, always room for improvement and aspects that could have been executed better. In this chapter, the research process is evaluated and its outcome discussed.

The chosen research methods were appropriate for this purpose and gave an adequate amount of information to draw conclusions. The interview as a primary data collection method was a good choice, as it allowed flexible investigation of the informants' experiences. The respondents could be chosen so that they presented relevant observation units in terms of this research.

However, conducting the interviews by phone had certain disadvantages. Firstly, as there was no possibility of recording the interviews, the responses could not be transcribed. This might slightly weaken the reliability of the results. Although the notes were written down in the words of the respondents', they are still the interviewer's interpretations of what was said. Recording and transcribing the interviews would have allowed a word for word analysis of the responses.

The open-ended questionnaire gathered opinions on the parking issues in Lutakko and supported the interview quite well as a secondary data collection method. In this research the purpose of the questionnaire was not to generate statistics. In different circumstances, however, a quantitative questionnaire could have been conducted. This might be a possibility for future research.

This case study increased the knowledge on how the residents of Lutakko view the parking situation in their neighborhood. A similar research on the views of the end-users of the parking facilities in Lutakko had not been done before. Therefore these results are valuable information and have potential to contribute to the discussion on parking in Lutakko.

This research was a case study that concentrated on very specific issues in a unique environment like Lutakko. This leads to an assumption that the results might not necessarily be generalizable to other situations. However, the results of this research might be of help when starting to conduct a similar research in other environments. The defined problem categories might be used as a guideline for the research.

There are still possibilities for further research on the parking issues in Lutakko. As Lutakko neighborhood is still under development and construction, it is unclear what the parking situation will be when the construction is finished. A similar research could be conducted in the future to find out how the situation has developed. Those results could be compared to the results of the present study.

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# APPENDICES

## Appendix 1 a. Interview Questions: Residents (Finnish)

1. Onko Lutakossa mielestänne pysäköintiongelmia?

Millaisia?

2. Onko teillä oma parkkipaikka? Kyllä [ ] Ei [ ]

Olisiko tarvetta? Kyllä [ ] Ei [ ]

3. Ovatko asukkaiden autopaikat liian kalliita? Kyllä [ ] Ei [ ]

Mikä olisi sopiva hinta?

4. Onko taloyhtiöllänne vieraspaikkoja?

Ovatko vieraspaikat vieraiden käytössä vai käyttävätkö niitä asukkaat?

Valvotaanko vieraspaikkojen käyttöä?

Tarvitaanko taloyhtiöille lisää vieraspaikkoja? Kyllä [ ] Ei [ ]

5. Onko väärin pysäköinti yleistä Lutakon alueella? Kyllä [ ] Ei [ x]

Missä ja mitä sille voisi tehdä?

6. Onko joku tietty viikonpäivä, kellonaika tai muu ajankohta jolloin on erityisen vaikea löytää paikoitustilaa? Kyllä [ ] Ei [ ]

7. Ovatko pysäköintiajat liian lyhyitä tai muuten vaikeasti havaittavissa?

Kyllä [ ] Ei [ ]

Miten asiaa voisi parantaa?

8. Käytättekö koskaan Jyvä-Parkin pysäköintialueita? Kyllä [ x] Ei [ ]

Onko niissä joku ongelma?

9. Ovatko ihmiset riittävän tietoisia alueen pysäköintimahdollisuuksista?

Kyllä [ ] Ei [ ]



Mistä alueista erityisesti ei tiedetä?

10. Mihin tarvittaisiin lisää pysäköintitilaa?

11. Onko mielestänne tilanne menossa parempaan vai huonompaan suuntaan?

Miten tilanne on muuttunut?

12. Miten Lutakon pysäköintiongelmia voisi ratkaista? (esim. viikko-osake parkki, opiskelijahintaiset parkkipaikat, yritysten pysäköintitilat vapaaksi viikonloppuisin)

### **Appendix 1 b. Interview Questions: Residents (English)**

1. In your opinion, are there parking problems in Lutakko?

What kind of problems?

2. Do you have a residential parking stall? Yes [ ] No [ ]

Would you need one?

3. Are the residential parking stalls too expensive in your opinion? Yes [ ] No [ ]

What would be an appropriate price?

4. Are there guest parking spots for your residential building? Yes [ ] No [ ]

Have you seen parking spots reserved for guests being used by residents?

Is the use of guest parking spots monitored?

Would there be a need for more guest parking space for your residential building? Yes [ ] No [ ]

5. Is parking abuse common problem in Lutakko? Yes [ ] No [ ]

Where does it happen and what could be done to it?

6. Is there a certain day of the week, time of the day or other point of time

when finding a parking spot is particularly difficult? Yes [ ] No [ ]

7. Are the parking time limits too short or hard to detect? Yes [ ] No [ ]

How could this be improved?

8. Do you ever use the parking services offered by Jyvä-Parkki? Yes [ ] No [ ]

Have you had any issues with them?

9. Are people sufficiently aware of the area's parking possibilities? Yes [ ] No [ ]

Are there some particular areas that are unknown to people?

10. Is there a specific area in Lutakko that would need more parking space?

11. In your opinion, is the parking situation improving or getting worse?

How has the parking situation developed?

12. Do you have suggestions on how to solve parking problems in Lutakko?  
(e.g. time share parking, student-priced parking spots, assigning company  
parking stalls for public use during the weekends)

## **Appendix 2 a. Interview Questions: Housing Company (Finnish)**

1. Onko Lutakossa mielestänne pysäköintiongelmia? Kyllä [ ] Ei [ x]

Millaisia?

2. Valvotaanko vieraspaikkojen käyttöä? Kyllä [ ] Ei [ x]

3. Onko väärin pysäköinti yleistä Lutakon alueella? Kyllä [ ] Ei [ x]

Missä ja mitä sille voisi tehdä?

4. Millaisia pysäköintiin liittyviä kysymyksiä tai ongelmia on tullut esiin?

5. Mihin tarvittaisiin lisää pysäköintitilaa?

6. Onko mielestänne tilanne menossa parempaan vai huonompaan suuntaan?  
Miten tilanne on muuttunut?
7. Miten Lutakon pysäköintiongelmia voisi ratkaista?

## **Appendix 2 b. Interview Questions: Housing Company (English)**

1. In your opinion, are there parking problems in Lutakko?  
What kind of problems?
2. Is the use of guest parking spots monitored? Yes [ ] No [ ]
3. Is parking abuse common problem in Lutakko? Yes [ ] No [ ]  
Where does it happen and what could be done to it?
4. What kind of parking related issues have come to your attention?
5. Is there a specific area in Lutakko that would need more parking space?
6. In your opinion, is the parking situation improving or getting worse?  
How has the parking situation developed?
7. Do you have suggestions on how to solve parking problems in Lutakko?

**Appendix 3 a. Questionnaire (Finnish)**

1. Millaisia ongelmia tulee mieleen Lutakon pysäköintiin liittyen?
2. Onko jokin tietty ajankohta jolloin on erityisen vaikea löytää paikoitustilaa? (viikonpäivä, kellonaika tms.)
3. Miten Lutakon pysäköintiongelmia voisi ratkaista? (esim. viikko-osake parkki, opiskelijahintaiset parkkipaikat, yritysten pysäköintitilat vapaaksi viikonloppuisin)

**Appendix 3 b. Questionnaire (English)**

1. What kind of issues related to parking in Lutakko come to your mind?
2. Is there a certain point of time when it is particularly difficult to find parking space in Lutakko? (a day of the week, a time of the day etc.)
3. Do you have suggestions on how to solve parking problems in Lutakko? (e.g. time share parking, student-priced parking spots, assigning company parking stalls for public use during the weekends)